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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,341	02/25/2004	Kazuhiro Takeda	SIC-03-047	2340

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DELAND LAW OFFICE  
P.O. BOX 69  
KLAMATH RIVER, CA 96050-0069

EXAMINER

NGUYEN, CUONG H

ART UNIT PAPER NUMBER

3661

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/708,341	TAKEDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	CUONG H. NGUYEN	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 3/31/06 (the RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/30/06</u>   | 6) <input type="checkbox"/> Other: _____                                    |

***DETAILED ACTION***

1. This Office Action is the answer to the RCE received on 3/31/06, which paper has been placed of record in the file.
2. Claims 1-37 are pending in this application. The IDS (submitted on 5/30/06) with 2 non-translated Japanese references is noted.

***Drawings***

3. The submitted drawings are acceptable for examining purposes.

***Response***

4. The examiner respectfully submits that claiming a display component housed within a case member, and a computing component is disposed outside of the case member (per claim 1) are not an inventive concept considering they are merely “components” of a bicycle for displaying information from computing components (whether they are put in a box or in adjacent box – the “reason” for this is not clearly show a utility of this invention). There are many motivations for this “reason”; one of them is to make the display as small as possible or fit to a particular design (this practice has been well-known); then that computing component would be disposed outside a monitor’s case (the applicant argues that Downs’ display component (16) does not calculate anything BUT ADMITTING that “All calculations are performed by computer (14), which is not part of display component (16). Claim 1 is directed to a bicycle display apparatus; therefore, even that apparatus can do calculations DO NOT provide an inventive concept just because integrating a processor for calculating data INTERNAL or EXTERNAL of a display device is a matter of design choice; this does not provide any different utility; and the examiner fails to see any exceptional advantage from this reason.

5. On page 7 of this paper, applicant argues that claims 13, 20-23, and 25-28, in addition, recite a particular manipulation of data that is neither disclosed nor suggested by Dawn. The examiner submits that: a claimed apparatus comprises “physical” components that make-up that apparatus; claiming a bicycle display apparatus alone (without using on a bicycle – actually does not intend to do any calculation because of no input); therefore, claims 13, 20-23, and 25-28 are interpreted as:

- claim 13 is directed to an apparatus, comprising a display that storing “a particular” information.
- claim 20 is directed to an apparatus, comprising a memory for storing “a particular” information.
- claims 21, and 28 are directed to an apparatus, comprising of displaying “particular” information; wherein that “particular” information are calculated.
- claim 22 is directed to an apparatus, comprising information about travel distance.
- claim 23 is directed to an apparatus, comprising a display component to display information; e.g., total travel distance.
- claims 25-26, 31 are directed to an apparatus, comprising a display component that display another information from a calculation (using a reference, and a number/an output from another calculation).

***Claim Rejections - 35 USC § 112***

6. Claim 27 is rejected on 35 USC 112, 2<sup>nd</sup> para. because “the cumulative information” in lines 1-2 does not particularly refer to “the second additional cumulative information” of line 1-2 in claim 26, or “the first additional cumulative information” of lines 2-3 in claim 26.

7. Claims 32-33, 36 are rejected on 35 USC 112, 2<sup>nd</sup> para. because it is unclear for "the information input is detachable from the information output"; is it a structural/physical requirement? Or a structure that "buffering" the input/output stage? (when that apparatus is turn OFF, that is "detachable" – no flow of information).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

**8. Claims 1-6, 11-16, 18-20, 24, 30-31, 34-35, and 37 are rejected under 35 U.S.C. 103(a) being unpatentable over Downs (US Pat. 5,629,668).**

A. As per claims 1, 3, 15-16, 30-31, and 37: As best interpretation, independent claim 1 merely discloses an apparatus, comprising what are already taught by Downs:

- a calculator attached to a bicycle to compute travel distances: such as counting a total number of wheel turn, or said bicycle's speed (see Downs, Fig.1, col.2 lines 55-62, and the abstract); and
- a display screen is detachably attached to a bicycle (see Downs, the abstract, and col. 2 lines 51-53).

Downs does not expressly disclose that a display component for a bicycle including a capability of calculation.

However, claiming a display component housed within a case member, and computing components are disposed inside/outside/spacing apart of case members (e.g., per claim 1, 30, and 37) are not an inventive concept considering they are merely “components” of a bicycle for displaying information from computing components – e.g., these components are well-known to be placed nearby. There are many motivations for this; one of them is to make the display as small as possible; then that computing component would be disposed outside a monitor’s case (the applicant argues that Downs’ display component (16) does not calculate anything BUT ADMITTING that “All calculations are performed by computer (14), which is not part of display component (16). Claim 1 is directed to a bicycle display apparatus; therefore, even that apparatus can do calculations DO NOT provide an inventive concept just because integrating a processor for calculating data INTERNAL or EXTERNAL of a display device is a matter of design choice; this does not provide any different utility.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ bicycle to make the display containing computing components inside of a monitor’s case for an advantage of reducing the signal lines from such computing component to a display device, and also keeping that computing component in a secure place.

B. As per dependent claims 4, 6, and 34: Downs also suggests about supplying a power source 26 to run a computer 14, and using sensors as input signals to said calculator means, and said display means (only one-way distributed information - see Downs, claim 20, and col.2 lines 55-62).

C. As per dependent claim 5: Downs also suggests about using a wire/cable (a single communication line) for inputs/communication between a display device, and a calculation means (see Downs, col.2 lines 30-36).

D. As per dependent claim 11: Downs also suggests about turning/switching ON a button/switch to power up a display device 10, then providing a pulse signal means from sensor assembly 12 to said calculator (see Downs, Fig.1, and claim 20).

E. As per dependent claims 2, and 12: Downs also suggests about using a memory in computer 14 for storing calculated information (see Downs, col.2 line 60, and claim 12).

F. As per dependent claims 7-8: Downs also suggests about using a bicycle wheel rotation information for calculation (see Downs, col.2 lines 58-62, and claim 1).

G. As per dependent claim 10: Downs also suggests about said information comprises a total distance traveled by the bicycle (see Downs, col.5 lines 9-20: "Referring to FIG. 2b, the distance display screen 34 of display 30 includes an upper portion having the wheel setting 76 and current speed 54 displayed as described above. The middle portion displays a trip distance 52 as indicated by the "DST" symbol defined as the total distance the bicycle has traveled. The microprocessor 24 computes and records the trip distance 52 in increments of 0.1 miles (or kilometers) whenever the wheel rotates. The trip distance 52 can be configured to record up to 1,000 miles (or kilometers) and to reset to zero (0), for example, recording up to 9999.9 miles (or kilometers). As above, the lower portion continuously displays the 12 hour clock 62 and temperature 64."').

H. As per claim 14: Downs also suggests that cumulative information are calculated for a final result using a CONTROL DEVICE 28, and a COMPUTER 14 – it is inherent that previous data are used as a reference to subsequent data (see Downs, Fig.1).

I. As per dependent claim 24: Downs also suggests about using reference information (see Downs, col.3 lines 35-47:“(iii) refer to a table of common tire sizes and input the corresponding number of the wheel size setting”).

J. As per independent claim 18: Downs teaches claimed limitations as in claims 1, and 14.

Downs also suggests about an information receiver (e.g., a MICROPROCESSOR 24), a memory for storing reference information (same rationale as rejected claim 24), and a component to initiating computation (same rationale as rejected claim 11 – see col.2 line 60).

K. As per claims 19, and 35: Downs teaches claimed limitations as in claim 3.

Downs uses mounting brackets for attaching a display to his bicycle (see Downs col. 2 lines 52-54; it is inherent that the display has its housing space; it is also inherent that a mounting bracket is positioned on a bicycle handlebar.

**9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Downs (US Pat. 5,629,668), in view of Kitamura (US Pat. 6,418,041).**

A. As per claim 9: The rationale and references for a rejection of claim 8 are incorporated.

Downs does not disclose that bicycle’s rotation information comprises signals from an alternating current generator that rotates with the bicycle wheel’

However, Kitamura teaches that idea (see Kitamura “The dynamo hub 8 of the front wheel 6 fixed to the front end of the front fork 3 includes an externally mounted roller-type front brake and serves as an enclosure for an *AC generator* 19 (FIG. 5) for generating electricity by the rotation of the front wheel 6.”).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ bicycle to include the above teaching of Kitamura (disclosing that bicycle’s rotation information comprises signals from an alternating



current generator that rotates with the bicycle wheel – this is a very old application to get electricity from a bicycle because conversion from DC to AC source or vice versa is already possible) for the advantage that users can have the ac source required for bicycle's utilities.

**10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Downs (US Pat. 5,629,668), in view of Quintilian (US Pat. 4,319,129).**

The rationale and references for a rejection of claim 16 are incorporated.

Downs teaches a device 18 to SET a particular selection (see Downs, Fig.1).

Downs does not expressly disclose that bicycle's display component comprises a display switching component for alternatively displaying different information.

However, Quintilian clearly teaches about alternatively displaying different information on a display apparatus (see Quintilian, claim 12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs' bicycle to include the above teachings of Quintilian for the advantage of a user can select different options when monitoring speed, time, or distance travel on a monitor screen.

**11. Claims 13, 20-23, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downs (US Pat. 5,629,668).**

A. As to claims 13, 20, 29, and 25: The rationale and references for a rejection of claim 12 are incorporated.

Downs discloses a display component (see Downs, Fig.1, display 10).

Downs does not disclose that cumulative information may be use as referencing information.

Downs does not disclose about how to get those particular numbers.

Downs does not explicitly disclose about a second computing component (per new claim 29).

However, the examiner respectfully submits that cited reference of Downs already meets the claimed limitations because his invention is directed to an apparatus comprising physical components – may including an “extra” computing component - (reference data are used as in rationale for rejection of claim 24), and claiming “how” is not a requirement for a limitation within an apparatus claimed format – (please note that Downs already obtains cumulative information and using stored reference information, and claiming an extra computing component for a bicycle is not a new inventive concept).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ bicycle to integrate a display component with a calculator/”extra” computing component(s) to compute cumulative information from derived information which may be used for references for a benefit of saving required spaces or to increase computing capabilities, and using previous obtained values.

B. As to claims 21, and 26: The rationale and references for a rejection of claim 20 are incorporated.

Dawns does not expressly disclose that cumulative information are calculated by performing a subtraction with the subsequent cumulative information and the previous reference information.

However, the examiner respectfully submits that cited reference of Downs already meets the claimed limitations because these claims are directed to an apparatus

comprising physical components , and claiming “how” is not a requirement for a limitation within “an apparatus” claimed format – (please note that Downs already obtains cumulative information and using stored reference information; a subtraction can be a simple calculation for reducing the predetermined distance).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ bicycle to integrate a display component with a calculator to compute cumulative information from derived information which may be used for references for a benefit of using previous obtained values.

C. As per dependent claim 22: Downs also teaches about said information comprises a total distance traveled by the bicycle would be shown on display 10 of Fig.1 (same rationale as for rejected claim 10).

Downs does not disclose about a first additional cumulative information comprises travel distance.

However, the examiner respectfully submits that for traveling 2 consecutive sections of road having 2 sections, the 1<sup>st</sup> section is added by input from traveling of 2<sup>nd</sup> section; that exemplary situation is claimed by the applicant.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ apparatus to disclose about a first additional cumulative information comprises a travel distance for a benefit of continuing adding consecutive information to a calculator.

D. As per dependent claims 23, and 29: Downs also teaches about displaying information comprises a total distance traveled by the bicycle.

The examiner respectfully submits that in an SUV Lexus RX 300 made in 2001, two “clocks”/indicators in an odometer are used for indication of total distance travel, and trip mileage/travel distance – they represent simultaneously 2 different “calculating components”/information for 2 different displays/calculations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ apparatus with above Lexus’ application to display about a cumulative travel distance and a trip mileage (by pressing a switch) for a benefit of knowing 2 different information about distance travels (e.g., for a mileage/gallon estimation) without performing a calculation.

E. As per dependent claims 27-28: Downs also teaches about displaying information comprises a cumulative total distance, and a trip mileage traveled by the bicycle as discussed for a rejection of claim 23.

Downs does not disclose a remaining travel distance.

The examiner respectfully submits that displaying a result from a simple calculation of COMPUTER 14: to subtract a total distance from a travel distance would give a value for a remaining travel distance – then displaying that result on DISPLAY 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Downs’ apparatus by displaying a result of said subtraction for a benefit of showing an estimation of the necessary time to spend for travel without the need for using a calculator.

### **Conclusions**

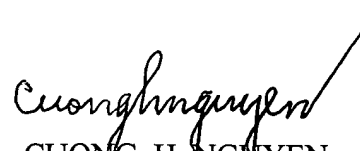
12. Claims 1-37 are not patentable.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CUONG H. NGUYEN whose telephone number is 571-272-6759. The examiner can normally be reached on 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THOMAS G. BLACK can be reached on 571-272-6956. The Rightfax number for the organization where this application is assigned is 571-273-6956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Please provide support, with page and line numbers, for any amended or new claim in an effort to help advance prosecution; otherwise any new claim language that is introduced in an amended or new claim may be considered as new matter, especially if the Application is a Jumbo Application.

  
CUONG H. NGUYEN  
Primary Examiner  
Art Unit 3661